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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,238	08/17/2001	Michael Bazylenko	020374-000400US	4826

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EXAMINER

FORTUNA, JOSE A

ART UNIT PAPER NUMBER

1731

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/932,238	Applicant(s) BAZYLENKO, MICHAEL	
	Examiner José A Fortuna	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 9 and 14-18 are objected to because of the following informalities: in claim 9 the symbol for argon should be Ar, instead of AR. In claims 14-18, acronyms PECVD should be preceded, at least in the independent claim, by its meaning. Even though acronyms are permitted in a claim, its meaning should preceded its use, at least in the independent claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-21, 23-26, 28, 31-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Demaray et al., US Publication No. 2003/0063883 A1.

Demaray et al. teach a planar optical waveguide in which a cladding layer is deposited on a waveguide core and a raised structure, another waveguide core, and then etched by sputtering, see abstract and figures. Demaray et al. teach the formation of the core over a substrate, see abstract and paragraphs [0026] and [0027] and teach in [0028] that the cladding could be done by vapor phase deposition or by sputtering. Demaray et al. teach the sputtering and etching at the same time, see [0036] and figures 4A and 4B. In paragraph [0032] Demaray et al. teach one of the advantages of sputtering deposition and

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etching at the same time, i.e., a smoothest surface is obtained as compared with the conventional process. Demaray et al. teach the use of argon, Ar, as the background sputtering gas, see [0030]. In [0037] Demaray et al. teach that the power of the substrate and target can be adjusted such that the rates of deposition and etching are approximate the same for a range of intermediate angles. Note that at least one of the deposition parameter needs to be controlled in order to control the cladding layer, e.g. the thickness of the layer needs to be controlled to desired levels. Therefore, the controlling step of claims 1 and 31 is inherently taught by the reference, Demaray et al. Note also that Demaray et al. show trapezoidal core/cladding structures, see figures.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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6. Claims 22, 27, 29-30 and 40-41 rejected under 35 U.S.C. 103(a) as being unpatentable over Demaray et al., cited above.

Demaray et al. fail to teach the stress of the different layers of claim 22, nor the stages of deposition and etching of claim 27, nor the aspect ratio of claims 29-30 and 40-41.

However, it has been held that optimizing result effective variables would have been obvious to one of ordinary skill in the art. Note that minimizing the stress(es) in a structure is a goal in the industry, so to minimize any damage cause by it, the stress. The aspect ratio of the core and the raised structure is just a simple optimization so to obtain the least amount of interference in a waveguide/optical device.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 42-45 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Demaray et al., US 2003/0127319 and US 2003/0063883. The latter previously cited.
9. Claims 42-45 are product by process claims and Demaray et al. teach a planar optical device similar to the one claimed. In the event any differences can be shown for the product -by- process claims 42-45, as opposed to the product taught by the reference Demaray et al., such differences would have been obvious to one of ordinary skill in the art as routine modification of

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the product in the absence of a showing unexpected results, see *In re Thorpe*, 227 USPQ 964 (CAFC 1985).

As the afore mentioned claims are product by process claims, it is deemed that "[A]ny difference imparted by the product by process claims would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicants to establish that their product is patentably distinct, ..." *In re Brown*, 173 U.S.P.Q. 685, and *In re Fessmann*, 180 U.S.P.Q. 324.

Further, "[P]rocess limitations are significant only to the extent that they distinguish the claimed product over the prior art product." *In re Luck*, 177 U.S.P.Q. 523 (1973)

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure in the art of "Method of depositing a cladding layer."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A Fortuna whose telephone number is 703-305-7498. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 703-308-1164. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0662.

José A Fortuna
Primary Examiner
Art Unit 1731

JAF